A Test of Endurance

Addressing migration and security risks by means of landscape restoration in Africa

Planetary Security
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June 2018

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Acknowledgements

This document is an output from a project commissioned by the Ministry of Agriculture, Nature and Food Quality. This report would not have been possible without their financial support. We are likewise grateful to the European Climate Foundation for their support in organising a closed side-meeting during the Planetary Security Conference 13 December 2017 titled 'Climate, land, migration and peace: how to connect domains and scale up action in Africa'. We are also grateful to the high-level participants from international organisations, foundations, private sector and development banks to this closed meeting. The authors likewise wish to thank Anca-Elena Ursu (Clingendael Institute), Barbara Bendandi (UNCCD), Annelies Sewell (Commonland/Planbureau voor de Leefomgeving), Ko Colijn (Clingendael Institute) and Bert Metz (European Climate Foundation) for their generous insights during the review process of this work.

List of abbreviations

AFR100	African Forest Landscape Restoration Initiative
AU	African Union
BMZ	Germany's Federal Ministry for Economic Cooperation and Development
CBD	Convention on Biological Diversity
CGIAR	Consultative Group for International Agricultural Research
CIFOR	Center for International Forestry Research
CSOs	Civil society organisations
ECOWAS	Economic Community of West African States
EU	European Union
FAO	Food and Agriculture Organization
FLR	Forest and Landscape Restoration
GEF	Global Environment Facility
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GPFLR	Global Partnership on Forest Landscape Restoration
IFAD	International Fund for Agricultural Development
IGAD	Intergovernmental Authority on Development (Eastern Africa)
IOM	International Organisation for Migration in United Kingdom
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IUCN	International Union for Conservation of Nature
NEPAD	New Partnership for African Development
ODA	Official development assistance
PBL	Netherlands Environmental Assessment Agency (Planbureau voor de Leefomgeving)
REDD+	Reduce emissions from deforestation and forest degradation
SDGs	Sustainable Development Goals
USD	US dollars
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNDP	UN Development Programme
UNEP	UN Environment Programme
UNFCCC COP	United Nations Framework Convention on Climate Change, Conference of the Parties
UNSC	UN Security Council

Executive summary

For the African continent, the ability to manage trade-offs at a landscape scale has huge potential to influence the future of migration and conflict, as well as the future of land resources, food security and biodiversity. Integrated land management can act as an accelerator for achieving the Sustainable Development Goals and can be considered an essential element of a sustainable strategy to address the root causes of irregular migration. A Marshall Plan for sub-Saharan Africa and the Sahel should therefore include the potential of landscape restoration approaches to achieve multiple wins, while taking into account its long-term effects and short- and medium-term risks.

This report aims to assess, by setting out a stakeholder mapping, to what extent landscape restoration initiatives (potentially) address migration and security objectives in Africa. The issue of land degradation and restoration is receiving increasing attention from policy makers with regard to addressing the root causes of migration. Landscape restoration initiatives in Africa have political momentum, with African political leaders endorsing restoration initiatives such as the African Forest Landscape Restoration Initiative (AFR100) and the Great Green Wall Initiative.

Africa is particularly vulnerable to land degradation, with desertification affecting around 45 percent of Africa's land area.[1] A large proportion of Africa's land cover is composed of varying types of drylands. The issue of land degradation is even more pressing considering the expected doubling of the population in Africa between 2018 and 2050, rapid urbanisation, and the high dependency of over 80 percent of the population on local land for livelihoods (in sub-Saharan Africa). This, in turn, is likely to have an impact on involuntary migration, conflict, food insecurity and poverty. Even though the statistical and causal relationships between these problems are still the subject of academic debate, evidence is mounting that the relationships do exist.

The stakeholder mapping as conducted for this study shows the current competition between different actors, fragmented initiatives and lack of scale in restoration initiatives. Landscape restoration projects often suffer from lack of data or coordination, integration barriers (e.g., siloed organisation and financing), high dependence on the local context, and limited (local) stakeholder involvement. At present, the vast majority of projects are still dependent on official development assistance (ODA). The private/financial sector, foundations, Chinese investors and local farmers are noticeably absent

1 ELD, UNEP (2015). The Economics of Land Degradation in Africa: Benefits of Action Outweigh the Costs. http://www.eld-initiative.org/fileadmin/pdf/ELD-unep-report_07_spec_72dpi.pdf (accessed January 2018).

in the initiating phase of landscape restoration initiatives due to the high risks involved. As indicated in the first *Global Land Outlook* of 2017, ambitious restoration targets 'cannot be achieved with the business-as-usual approach limited to tree planting projects'.[2]

Links with migration and security objectives could help to make the case to scale up current restoration projects. This would bring more complexity, but would also contribute towards a more integrated approach. Moreover, investing in landscape restoration projects could prove to be an effective option in comparison to other efforts to reduce irregular migration and promote stability. It might offer better long-term prospects to people who are considering migration or to those attracted by violent extremism.

In 2017 and 2018 the United Nations Security Council acknowledged the link between land degradation and instability in the overlapping Lake Chad, Sahel and West Africa regions. More recently this was expanded to Somalia. Such a link offers a potential long-term perspective that could improve relations between European and African countries. In practice, some land restoration projects are already working under the premise that they contribute to European migration policy objectives and stability. The government of the Netherlands has been rather absent hitherto, but could contribute to alignment with migration and security objectives and synergy of restoration initiatives, as the country is very active in the food and water sector, and is home to both the biggest agricultural financer (Rabobank) and university (Wageningen University and Research).

To achieve the full potential of landscape restoration initiatives to address migration and security objectives in Africa, the report makes the following recommendations:

1. Use a long-term and *integrated* perspective for landscape restoration, such as a 'Marshall Plan for the Sahel'. It is important that a long-term commitment from a mixed group (donors, private sector, foundations, domestic groups) is combined with short-term compensation for economic losses in the region and respect for community rights in the region at the level of local communities, and that there are strategies in place to mitigate greater migration and security risks in the region at the initiation phase of the restoration approaches. Economic alternatives for those who lose their sources of income need to be considered.
2. Move beyond dependency on ODA. We recommend *blending* international public finance with other financial sources. Investments made by African governments, the private sector and philanthropic foundations are currently limited. Engaging these sectors further could generate opportunities towards action and scaling-up of initiatives.

2 UNCCD (2017). Global Land Outlook: First Edition. http://www2.unccd.int/sites/default/files/documents/2017-09/GLO_Full_Report_low_res.pdf (accessed January 2018).

3. Find a way to bring in multiple public and private stakeholders, and do so in a *combined* institutional space with the goal of moving towards defragmentation in the field of landscape restoration.
4. Connect the debate on food security in drylands affected by climate change to *mainstream* security and migration discussions, such as the Global Compact for Migration. In this respect, we could benefit from more analysis and new methodology (indicators) to assess the contribution of landscape restoration to migration and stability objectives.

1 Introduction

> 'The health and productivity of the ground that we stand on will influence the future prosperity and security of humankind' (Monique Barbut, Executive Secretary, United Nations Convention to Combat Desertification)[3]

The issue of land degradation and desertification is a pressing environmental problem. Degraded land is a state of land that results from the persistent decline of or loss in biodiversity and ecosystem functions and services which cannot fully recover unaided within decadal timescales.[4] Africa is particularly vulnerable to land degradation, with desertification affecting around 45 percent of the continent's land area.[5] Land degradation in Africa has been the result of unsustainable land management practices and the exacerbating effects of climate change. Land degradation negatively affects food supplies and the ability of land to retain water. The current economic impact is dramatic, estimated between 6.3 to 10.6 trillion dollars, or between 10 and 17 percent of global GDP.[6]

The issue of land degradation is even more pressing considering the population forecasts for Africa and its high dependency on food production. Between 2018 and 2050, 26 African countries are projected to at least double their current population size.[7] This is particularly worrisome as, according to the UN Food and Agriculture Organization (FAO), 83 percent of sub-Saharan Africans depend on the land for their livelihoods, and food production will have to increase almost 100 percent by 2050 to

3 Barbut, M. (30 September, 2015). '17 SDGs, but is there a Priority SDG Target?', guest blog at International Institute for Sustainable Development IISD. http://sdg.iisd.org/commentary/guest-articles/17-sdgs-but-is-there-a-priority-sdg-target/ (accessed January 2018).

4 IPBES (24-28 October 2016). Regional assessments on biodiversity and ecosystem services and thematic assessment on land degradation and restoration, IPBES/MEP-8/7, p. 29, Bonn, Germany.

5 ELD and UNEP (2015). The Economics of Land Degradation in Africa: Benefits of Action Outweigh the Costs.

6 Malawi, Kenya, Tanzania and Ethiopia lost respectively 2 billion, 11 billion, 18 billion and 35 billion US dollars from 2001 to 2009 due to land degradation, Cf Kirui, O. and Mirzabaev, A. (9-14 August 2015). Costs of land degradation in Eastern Africa, No. 212007, International Association of Agricultural Economists Conference, Milan, Italy.

7 United Nations Department of Economic and Social Affairs (2017). World Population Prospects, 2017 Revision, ESA/P/WP/248. https://esa.un.org/unpd/wpp/publications/Files/WPP2017_KeyFindings.pdf (accessed January 2018).

keep up with (increasingly urban) population demands.[8] Land degradation is likely to intensify competition for scarce natural resources, resulting in migration, instability and conflict, according to the *Global Land Outlook*[9] and the land degradation assessment of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).[10]

1.1 Landscape restoration and migration-security links

Sustainable Development Goal 15.3 requires countries to become land degradation neutral by 2030. While protecting soil quality is prioritised, it is necessary, in parallel, to restore and rehabilitate land that has already been degraded.[11] Landscape *restoration* initiatives in Africa have political momentum in that respect, with African political leaders endorsing restoration initiatives such as the Bonn Challenge (e.g., AFR100[12] and the Great Green Wall[13]) and the Security, Stability and Sustainability Initiative.[14] The economic argument is clear, as inaction on this issue is much more costly than the cumulative cost of action.[15] A recent report by the World Resources Institute found that every US dollar invested in restoring degraded forests can generate between 7 to 30 US dollars in economic benefits.[16] Successful examples of land restoration activities that yield economic and community benefits are found in Brazil, China, Costa Rica, Niger and Rwanda.[17] Land restoration likewise yields agricultural benefits and contributes to other Sustainable Development Goals (SDGs) (including SDG2: zero hunger) and the climate agenda (ability of land to sequester CO_2), while being an opportunity for employment for the younger African generation.

8 FAO (2013). 'Africa's Great Green Wall Reaches out to New Partners'. http://www.fao.org/news/story/en/item/210852/icode/ (accessed January 2018).

9 United Nations Convention to Combat Desertification (UNCCD) (2017). Global Land Outlook: First Edition, p. 8.

10 IPBES (2018). Outcomes IPBES-6. https://www.ipbes.net/outcomes (accessed April 2018).

11 IPBES defines restoration as 'any intentional activity that initiates or accelerates the recovery of an ecosystem from a degraded state' and rehabilitation as 'restoration activities that may fall short of fully restoring the biotic community to its pre-degradation site'. Cf IPBES/MEP-8/7 (2016).

12 African Forest Landscape Restoration Initiative (n.d.). http://www.afr100.org/ (accessed January 2018).

13 Great Green Wall (n.d.). http://www.greatgreenwall.org/great-green-wall/ (accessed January 2018).

14 UNFCCC (16 November 2016). '*Africa Action Summit,' an Initiative for Africa's Sustainable Development*'. http://www.infomediacop22.com/en/release-public/africa-action-summit (accessed January 2018).

15 ELD, UNEP (2015). The Economics of Land Degradation in Africa: Benefits of Action Outweigh the Costs. http://www.eld-initiative.org/fileadmin/pdf/ELD-unep-report_07_spec_72dpi.pdf

16 Ding, H. et al. (2017). Roots of prosperity: The Economics and Finance of Restoring Land. World Resources Institute. http://www.wri.org/sites/default/files/roots-of-prosperity.pdf (accessed January 2018).

17 Ibid.

Land degradation was found to be directly and indirectly linked in a chain of events. For example, direct drivers of land degradation such as urbanisation, infrastructure and agriculture can negatively impact security and stability.[18] Land degradation can also be an 'indirect driver' of migration; and land degradation has the potential to cause unemployment in African countries and drive young people towards radical and jihadist groups.[19]

The link between landscape restoration initiatives and the migration-security nexus will be the main focus of this mapping. While the intentions of landscape restoration initiatives are positive, many studies equally point to diverging interests and power relations in restoration which are often overlooked.[20] The main question in this report is therefore the following: To what extent do landscape restoration initiatives have the potential to address migration and security objectives in Africa?

1.2 Objective of stakeholder mapping

The objective of this report is to map the most prominent stakeholders and initiatives in landscape restoration in Africa, while looking for synergies in the context of landscape restoration addressing migration and security risks. The mapping aims to contribute to an understanding of the financing and benefits of these projects and the potential for new projects and scaling-up. Moreover, this study aims to shed more light on power relations in landscape restoration initiatives in Africa, and how these initiatives differ in interests and goals.

The research is based on a desk study and semi-structured interviews. The stakeholder mapping has made use of the network and reach of the Planetary Security Initiative, which has developed into the main international platform for discussing the relationship between climate and security and is implemented by the Clingendael Institute in collaboration with The Center for Climate and Security, Adelphi, SIPRI, and The Hague Centre for Strategic Studies. We have conducted multiple semi-structured interviews with experts, donors and beneficiaries, for example during the Planetary Security

18 UNCCD (2017). Global Land Outlook, p. 48.

19 UNDP (2017). Journey to extremism in Africa: drivers, incentives and the tipping point for recruitment. http://journey-to-extremism.undp.org/content/downloads/UNDP-JourneyToExtremism-report-2017-english.pdf (accessed January 2018).

20 See Baker, S., Eckerberg, K. and Zachrisson, A. (2014). Political science and ecological restoration. *Environmental Politics*, 23(3), pp. 509-524; Barr, C. M. and Sayer, J. A. (2012). The political economy of reforestation and forest restoration in Asia–Pacific: Critical issues for REDD+. *Biological Conservation*, 154, pp. 9-19; and Bliss, J. C. and Fischer, A. P. (2011). Toward a political ecology of ecosystem restoration. In Human Dimensions of Ecological Restoration (pp. 135-148). Island Press/Center for Resource Economics.

Conference in The Hague (12-13 December 2017), at a high level side-meeting on migration, land and peace (13 December 2017, supported by the European Climate Foundation) and at the Global Landscape Forum in Bonn (19-20 December 2017).

1.3 Structure of the report

Section 2 presents an overview of landscape restoration approaches, the landscape situation in Africa and the (potential) relationships between land degradation, migration and security. Section 3 maps the organisations and networks active in the area of landscape restoration in general and in contributing to migration, security and unemployment risks in particular. Section 4 gives a more systematic overview of the projects. A table in the appendix summarises the financial size of projects, the actors implementing them, project objectives and whether there are any links with migration, youth unemployment and security. This section also zooms in on challenges for the projects such as political sensitivities. Moreover, and importantly, the section ends by suggesting opportunities for synergies and more integrated landscape approaches to development. Section 5 draws conclusions and sketches the way forward for a platform to connect key stakeholders in landscape restoration.

2 Landscape restoration approaches and the link with conflict/migration/ security

2.1 Overview of landscape restoration approaches

The landscape restoration approach originates from the late 1990s in the field of forestry. At the time, it was named 'forest restoration', an industrial-style approach to reforestation and tree planting. During these years, the 'landscape approach' was brought to life, a concept that focused on land management, multi-land-use benefits, and balancing land-use trade-offs. This concept expanded towards 'forest landscape restoration' (FLR) in 2000. FLR places emphasis on meeting societal (future) needs through the recovery of ecosystem services. In 2003, under the leadership of the International Union of Conservation of Nature (IUCN), the Global Partnership on Forest Landscape Restoration (GPFLR) was created. The GPFLR is a consortium of analogous organisations that restore landscapes using the landscape approach. Together with the German government and world leaders, the GPFLR was heavily involved in the Bonn Challenge. The Bonn Challenge sets targets to restore 150 million hectares of land by 2020 and 350 million hectares by 2030.[21] In response to the Bonn Challenge, landscape restoration has received growing attention from the scientific community, policy makers and practitioners.

Given the complexity of land degradation, practitioners and academics have proposed a holistic landscape restoration approach.[22] This approach 'seeks to provide tools and concepts for allocating and managing land to achieve social, economic and environmental objectives in areas where agriculture, mining, and other productive land uses compete with environmental and biodiversity goals'.[23] While there is a longstanding scholarly debate concerning the landscape approach,[24] there are certain fundamental

21 FAO (2015). Before Bonn and beyond: the history and future of forest landscape restoration, in *Unasylva* vol, 66 2015/3, pp. 11-18. http://www.fao.org/3/a-i5212e.pdf (accessed January 2018).

22 Sayer et al. (2013). Ten principles for a landscape approach to reconciling agriculture, conservation, and other competing land uses, PNAS. doi:10.1073/pnas.1210595110.

23 Ibid.

24 GLF (2017). Digital Summit 5: 'What is the Landscape Approach?' Digital seminar. https://youtu.be/vjAUxevEUQE (accessed January 2018).

principles on which the concept builds.[25] These principles (briefly elaborated in *Box 1*) have been identified as important elements across the varying existing approaches to landscape restoration.

Box 1 **A brief overview of the 10 principles underlying successful landscape approaches as identified through consensus by a broad community of practice in Sayer et al. (2013).**

Box 1. **The summarised 10 landscape approach principles:**

1) permit room for continual learning and adaptive management
2) build trust and meet diversified stakeholder interests via common-concern entry points
3) multi-scale processes (local to macro) influence the landscape approach
3) land use is multifunctional, stakeholders will face trade-offs
5) involving multiple stakeholders leads to variety in expressing and framing objectives
6) negotiated and transparent change logic can facilitate essential stakeholder trust
7) rights and responsibilities clarification must be addressed during negotiations
8) participatory and user-friendly monitoring, equitably available to all stakeholders
9) build resilience via threat mitigation and vulnerability identification
10) strengthen stakeholder skills and abilities capacity via learning and idea exchange

Different organisations that are engaged in landscape restoration operate under varying project names. For example, they might be subsumed under *agroforestry*,[26] *climate smart agriculture*,[27] *integrated landscape management*,[28] *sustainable land*

25 Sayer et al. (2013). Ten principles for a landscape approach to reconciling agriculture, conservation, and other competing land uses, PNAS. doi:10.1073/pnas.1210595110.

26 World Agroforestry Centre (2017). Agroforestry and our role. http://www.worldagroforestry.org/about/agroforestry-our-role (accessed January 2018).

27 FAO (2017). Climate-Smart Agriculture. http://www.fao.org/climate-smart-agriculture/en/ (accessed January 2018).

28 Eco Agriculture Partners (2017). How we work. https://ecoagriculture.org/how-we-work/ (accessed January 2018).

management,[29] *ecological restoration*,[30] and *nature-based solutions*. The key here is to recognise consensus among varying projects, which is often rooted in the ten principles on landscape approaches, combining conservation, sustainable management and restoration.[31]

2.2 The African landscape situation

Continental Africa warrants attention because a large proportion of its landcover is composed of four types of drylands (hyper-arid, arid, semi-arid and dry sub-humid – see Figure 1). Drylands are among the most vulnerable landcover types.[32] Dryland degradation can stem from various overarching drivers: examples are climate variability, poor irrigation, deforestation, over-cultivation, overgrazing,[33] droughts and salinisation.[34] The stage following dryland degradation is also known as desertification.[35] Studies have estimated that between 1965 to 1995, 50 percent of the per capita arable land in Africa was degraded.[36] This includes prominent examples such as Lake Chad, which has shrunk by 90 percent in the last 40 years due to drought and irrigation.[37] Moreover, desertification is a concern for approximately 41 percent (267 million people) of the African population.[38] In addition, by 2050, sub-Saharan Africa is estimated to see a doubling of people living in drylands.[39]

29 UNCCD (2017). Sustainable land management (SLM). http://knowledge.unccd.int/topics/sustainable-land-management-slm (accessed January 2018).

30 According to the society for ecological restoration (2004) ecological restoration is the whole 'process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed'.

31 Cf Chatterton, P., Ledecq, T., and Dudley, N. (eds.) 2016. WWF Landscape Elements: Steps to achieving integrated landscape management. WWF, Vienna.

32 CGIAR (2018). Drylands and Land Degradation. http://drylandsystems.cgiar.org/facts/drylands-land-degradation (accessed January 2018).

33 Ibid.

34 FAO (2008). Chapter 1, Drylands, People and Land Use, in Water and Cereals in Drylands. http://www.fao.org/docrep/012/i0372e/i0372e00.htm (accessed January 2018).

35 IUCN (2015). Land degradation and climate change: the multiple benefits of sustainable land management in the drylands. https://www.iucn.org/downloads/land_degradation_issues_brief_cop21_031215.pdf

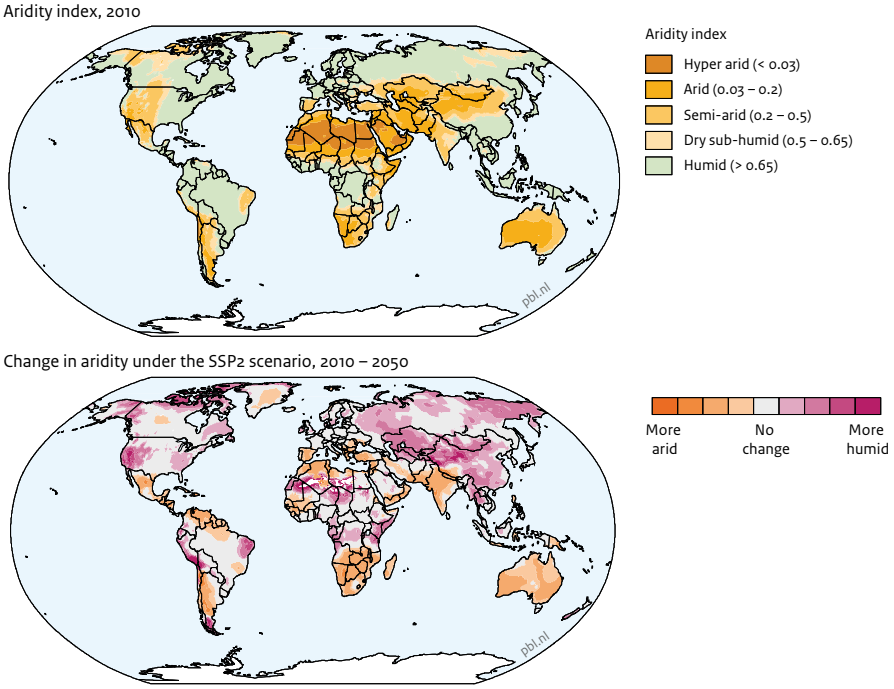
36 Ibid.

37 Nagarajan, C. (2017). Climate Change and Conflict in Lake Chad, interview, 2017 Planetary Security Conference. https://www.planetarysecurityinitiative.org/news/climate-change-and-conflict-lake-chad

38 FAO (2008). Chapter 1, Drylands, People and Land Use, in Water and Cereals in Drylands.

39 UNCCD (2017) Global Land Outlook: First Edition.

Figure 1 Aridity index. Source: PBL/IMAGE (2017)[40]



The causes of land degradation and its impacts on communities vary between African regions. In the African Sahel and the Dry Savannas soil depletion, droughts, increased land use, population growth, and weak institutions and policies have been identified as the main drivers of land degradation. North Africa is experiencing land degradation challenges from soil erosion, water scarcity, overgrazing, salinisation and varying precipitation patterns. Finally, in eastern and southern Africa, several countries experience land degradation predominantly because of high levels of evapotranspiration triggered by droughts.[41] Apart from the rural challenges, Africa also provides a striking example of urbanisation, with more than 80 'megacities' that have over half a million inhabitants – an increasing trend that is expected to continue, with predictions of 140

40 Esch, S. van der, et al. (2017). Exploring future changes in land use and land condition and the impacts on food, water, climate change and biodiversity: Scenarios for the UNCCD Global Land Outlook, PBL Netherlands Environmental Assessment Agency, p. 70. http://www.pbl.nl/sites/default/files/cms/publicaties/pbl-2017-exploring-future-changes-in-land-use-and-land-condition-2076.pdf.

41 CGIAR (2018). North Africa and West Asia. http://drylandsystems.cgiar.org/regions/west-african-sahel-and-dry-savannas (accessed January 2018).

megacities by 2030.[42] Therefore, it is not only rural areas that will face land-use pressures (including land degradation) and shifting food needs; areas surrounding these new urban areas can be expected to face intensified land-use pressures as well.[43]

2.3 The relationship between land degradation, migration, conflict and food security

The impact of land degradation on security, conflict and migration is a topic of debate. This link became more prominent when a study by Kahl (2006) found that land degradation is one of the prominent drivers of natural resource scarcity.[44] In 2014, Clingendael published the report *Terra Incognita*, which highlighted the work of Kahl, and broadened the scope by exploring the links between land degradation, food and water (in)security, conflict and migration.[45] The following sections will discuss food security, conflict and migration in greater depth, with a specific goal of bridging knowledge gaps.

2.3.1 Land degradation: the gateway to a food insecure and hungry world

The link between land degradation and food/nutrition security has received greater attention since 2011.[46] A recent study reported that land degradation is particularly a challenge to food security, because 44 percent of global cultivation systems are situated in drylands.[47] This study found that 1.5 billion people are directly affected by land degradation.[48] Furthermore, an expected global population growth to 9.6 billion by 2050 (compared to 7.2 billion in 2015) is anticipated to raise demands on food production, and significantly amplify land degradation and food insecurity.[49] Under this scenario,

42 IIED (2018). 'Cities of more than 500,000 people', Interactive data visual. https://www.iied.org/cities-interactive-data-visual (accessed March 2018).

43 FAO (2017). The future of food and agriculture: Trends and challenges, Rome. http://www.fao.org/3/a-i6583e.pdf (accessed January 2018).

44 Kahl, C. (2006). States, Scarcity, and Civil Strife in the Developing World, Princeton University Press.

45 Schaik, L. van, Dinnissen, R. (2014). Terra Incognita: land degradation as underestimated threat amplifier, Netherlands Institute of International Relations Clingendael. https://www.clingendael.org/sites/default/files/pdfs/Terra%20Incognita%20-%20Clingendael%20Report.pdf (accessed January 2018).

46 FAO (2011). The state of the world's land and water resources for food and agriculture: managing systems at risk, executive summary. http://www.fao.org/docrep/017/i1688e/i1688e.pdf (accessed March 2018).

47 Barbut, M., Alexander, S. (2015). Land degradation as a security threat amplifier: the new global frontline, UNCCD. http://catalogue.unccd.int/761_Barbut_Alexander_2015_Chapter1.1_Elsevier_Land_Restoration.pdf

48 Ibid.

49 IUCN (2015). Enhancing food security through forest landscape restoration: Lessons from Burkina Faso, Brazil, Guatemala, Viet Nam, Ghana, Ethiopia and Philippines. DOI: http://dx.doi.org/10.2305/IUCN.CH.2015.FR.2.en

climate change can act as a threat multiplier for it can contribute to further land degradation, which can lessen the (food) productivity and functionality of land.[50]

The opportunity here is that more than two billion hectares have been identified as suitable for landscape restoration. Restoring these lands could alleviate pressures for future food needs.[51] While there is a continuous search for more evidence-based research,[52] there is also a greater recognition for a need to move towards action.[53] Various international actors mirror this call for action; for example, the EU is active in providing grants to landscape restoration proposals that target food security, conflict and migration.[54]

2.3.2 Land degradation and conflict: the road from academic debate to the UN Security Council

The *Terra Incognita* report illustrated the need to look closer at the relationship between landscape restoration and conflict challenges.[55] Among other findings, the study found that land and soil degradation could raise the risks of civil war and armed conflict. Since then, important developments have followed, transferring the topic from scholarly debate to discussions at the highest intergovernmental fora. One example is the UN General Assembly *Resolution 70/206*, which recognised the threat of land degradation to peace and stability.[56] Another prominent example comes from the UN Security Council (UNSC).[57] For example, UNSC *Resolution 2349* concluded as follows:

50 Ibid.

51 Barbut, M., Alexander, S. (2015). Land degradation as a security threat amplifier: the new global frontline, UNCCD. http://catalogue.unccd.int/761_Barbut_Alexander_2015_Chapter1.1_Elsevier_Land_Restoration.pdf

52 IUCN (2015). Call for papers on: Enhancing food security through forest landscape restoration. Adapted from https://www.iucn.org/content/call-papers-enhancing-food-security-through-forest-landscape-restoration

53 UNCCD (2014). Desertification: The Invisible Frontline, second edition. http://www2.unccd.int/publications/desertification-invisible-frontline-second-edition (accessed January 2018).

54 European Commission (2016). Action Document: Reversing Land Degradation in Africa by Scaling-up EverGreen Agriculture. Adapted from https://ec.europa.eu/europeaid/sites/devco/files/c-2016-8242-annex-6_en.pdf

55 Schaik, L. van, Dinnissen, R. (2014). Terra Incognita: land degradation as underestimated threat amplifer, Netherlands Institute of International Relations Clingendael. https://www.clingendael.org/sites/default/fles/pdfs/Terra%20Incognita%20-%20Clingendael%20Report.pdf (accessed January 2018).

56 UNSG (22 December 2015). Resolution 70/206, A/RES/70/206. http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/70/206 (accessed February 2018).

57 Security Council Report (2017). In Hindsight: The Security Council and Climate Change - An Ambivalent Relationship. http://www.securitycouncilreport.org/monthly-forecast/2017-08/the_security_council_and_climate_change_an_ambivalent_relationship.php (accessed February 2018).

> 'RECOGNISES the adverse effects of climate change… on the stability of the [Lake Chad] Region, including through water scarcity, drought, **desertification**, **land degradation**, and **food insecurity**, and emphasizes the need for an adequate risk assessment and risk management strategies by governments and the United Nations relating to these factors.'[58]

This clearly acknowledges the connection between land degradation and food insecurity, although the caveat here is that links are not directly related to land degradation, but rather to climate change (an important driver of land degradation).[59] This resonates with the notion in the *Terra Incognita* report that land degradation acts as a threat amplifier in regions that experience conflict pressure from poverty, food and water scarcity, and population growth.[60] This view was also supported in the *Global Land Outlook* (2017), which stated that land degradation as a threat amplifier can increase or trigger conflict risk.[61] In January 2018 the issue (for example, see *Figure 2*) received greater credibility and validity following a UNSC presidential statement which

> 'recognizes the adverse effects of climate change and ecological changes among other factors on the stability of West Africa and the Sahel region, including through drought, **desertification, land degradation and food insecurity** and emphasizes the need for adequate risk assessments and risk management strategies by governments and the UN relating to these factors'[62]

58 UNSC (31 March 2017). Resolution 2349, S/RES/2349(2017). https://undocs.org/S/RES/2349(2017) (accessed February 2018).

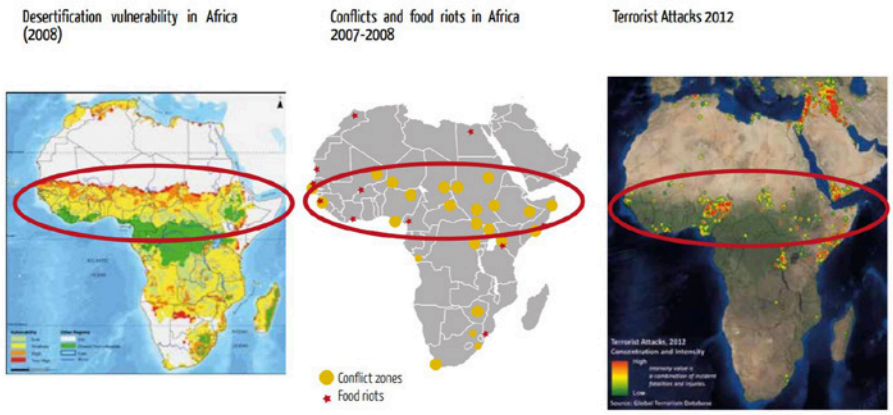
59 UNCCD (2017). 'Combating Climate Change? Combat Land Degradation, Says UNCCD Chief'. http://knowledge.unccd.int/publications/combating-climate-change-combat-land-degradation-says-unccd-chief

60 Schaik, L. van, Dinnissen, R. (2014). Terra Incognita: land degradation as underestimated threat amplifier.

61 UNCCD (2017) Global Land Outlook: First Edition.

62 UNSC (30 January 2018). Statement by the President of the Security Council, S/PRST/2018/3. http://www.un.org/en/ga/search/view_doc.asp?symbol=S/PRST/2018/3 (accessed January 2018).

Figure 2 Desertification, conflicts, food riots, and terrorist attacks in Africa. Adapted from *Desertification The Invisible Frontline*. UNCCD (2014)[63]



Another study recently found that droughts (a driver of land degradation) can increase the risk for riots by 10-50 percent.[64] As pieces of the puzzle start to connect the link between land degradation and conflict, we can observe that we have moved through three phases over the recent decade: from scholarly debate, to field observations, and finally to institutional recognition. In turn, institutions are signalling a need to progress to the next crucial phase: that is, to move from analysis to action.[65]

63 UNCCD (2014). Desertification: The Invisible Frontline, second edition.

64 Luchetti, J. (21 Sept, 2017). 'Droughts a cause of riots', Université de Genève. https://www.unige.ch/communication/communiques/files/9115/0547/8648/Drought___a_cause_of_riots_.pdf (accessed April 2018).

65 This call for action on 'the linked risks of climate change and security' was featured in the recent Hague Declaration on Planetary Security, which saw endorsement by key representatives from public, private and civil society sectors; to stress its importance, the Hague Declaration was the opening topic of the 15 December 2017 UN Security Council Arria Formula meeting on Preparing for security implications of rising temperatures; Planetary Security Initiative. (2017). Hague Declaration on Planetary Security. https://www.planetarysecurityinitiative.org/sites/default/files/2017-12/The_Hague_Declaration.pdf.pagespeed.ce.QjjTUyjl3f.pdf; UNSC, UN Web TV (15 December 2017). http://webtv.un.org/watch/fl-security-council-arria-formula-climate-change-and-security/5681754905001

2.3.3 Land degradation and migration

Last, and equally important, we are confronted with the land degradation-migration nexus. This link is strongly associated with the above-identified land degradation-food security-conflict nexus. For example, UN General Assembly resolutions 70/206[66] and 71/226[67] both recognise that 'combating desertification, land degradation and drought, including through sustainable land management, can contribute to easing forced migration flows'.

One important recent development is the first decision of an environmental convention on migration at the UNCCD COP 13 (2017).[68] This convention most importantly

> 'recognizes that desertification/land degradation and drought are challenges of global dimension and contribute to and aggravate economic, social and environmental problems such as poverty, poor health, lack of food security, biodiversity loss, water scarcity, reduced resilience to climate change and forced migration'[69]

Views on the land degradation-migration nexus were also discussed in the 2017 *Global Land Outlook*[70] and IPBES.[71] The report states that land degradation leads to violent conflict and (agricultural) productivity loss, thereby giving rise to forced migration, rural-urban migration and mass migration.[72] The *Global Land Outlook* also devoted specific attention to defining 'opportunities for action' in Africa's drylands. The report noted the need to create enabling conditions, that is, policy incentives, supportive laws, institutions[73] and investment opportunities.[74] Lessons learned from this section resonate those identified earlier: which is that there is a strong need to move towards action.

66 UNSG (22 December 2015). Resolution 70/206, A/RES/70/206.

67 UNSG (21 December 2016). Resolution 71/229, A/RES/71/229. http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/71/229 (accessed February 2018).

68 UNCCD (15 September 2017). Convention to Combat Desertification, ICCD/COP(13)/L.25. https://www2.unccd.int/sites/default/files/sessions/documents/2017-09/ICCD_COP%2813%29_L.25-1716167E.pdf

69 Ibid.

70 UNCCD (2017). Global Land Outlook, first edition.

71 IPBES (2018). Outcomes IPBES-6. https://www.ipbes.net/outcomes (accessed April 2018).

72 UNCCD (2017). Global Land Outlook, first edition.

73 On 'sustainable migration management' in e.g., Niger, cf. Molenaar, F. et al. (2017) A Line in the Sand: Roadmap for sustainable migration management in Agadez. https://www.clingendael.org/sites/default/files/2017-10/Roadmap_for_sustainable_migration_management_Agadez.pdf (accessed March 2017).

74 Ibid.

3 Key stakeholders and networks

With an extensive range of stakeholders, coordinating landscape restoration initiatives across scales and actors is challenging. Prominent stakeholders in landscape restoration are private investors, national governments, international organisations, civil society organisations (CSOs), regional development banks and local user groups.[75] Not all stakeholders would see their work as 'landscape restoration', which makes a good qualitative comparison difficult. Many stakeholders undertake similar initiatives but instead call them 'ecosystem restoration', 'sustainable land management', 'nature based solutions', 'climate smart agriculture', 'reforestation', (simply) 'restoration' or (more extensive) 'forest and landscape restoration', or the 'landscape approach'.[76] This section maps the stakeholders with the most scaled-up large initiatives that could be defined as landscape restoration. The section shows the potential of synergies when taking the narrative of reducing security, migration and unemployment risks on board.

While the idea of landscape restoration is not new, the large(r) donor initiatives in particular began to be implemented from the early 2000s. That led to some global multi-stakeholder initiatives, such as the Global Partnership on Forest and Landscape Restoration (GPFLR), which brings together governments, organisations, research institutes and communities under a common goal of the Bonn Challenge to restore 150 million hectares of deforested and degraded lands by 2020 and 350 million hectares by 2030.[77] As mentioned by the initiators, the Bonn Challenge 'is not a new global commitment but rather a practical means of realising many existing international commitments', including SDG target 15.3 on land degradation neutrality, Aichi Target 15 of the Convention on Biological Diversity (CBD), the UNFCCC REDD+ goal and the Rio+20 targets. The global initiatives and targets also paved the way for African regional initiatives such as AFR100. There are also more specific restoration initiatives in Africa related to migration and security, such as the Triple S (3S) and Great Green Wall

75 Sewell, A., Bouma, J. and Van der Esch, S. (2016). Investigating the challenges and opportunities for scaling up ecosystem restoration, Background report, PBL Netherlands Environmental Assessment Agency, p. 29. http://www.pbl.nl/sites/default/files/cms/publicaties/pbl-2016-investigating-the-challenges-and-opportunities-for-scaling-up-ecosystem-restoration_2356.pdf (accessed March 2017).

76 Ibid.

77 The Bonn Challenge (n.d.) http://www.bonnchallenge.org/content/challenge (accessed February 2018).

Initiatives.[78] One of the aggregated financial facilities is the Global Environment Facility (GEF), an international partnership of 183 countries, international institutions, CSOs and the private sector which addresses global environmental issues including landscape restoration.[79]

The objectives behind landscape restoration approaches in Africa are often a combination of biodiversity, climate change mitigation and adaptation, the fight against desertification, and food security and poverty reduction. There are nevertheless some specific land restoration-migration-security initiatives. This section covers the most important stakeholders in landscape restoration.

3.1 Stakeholders

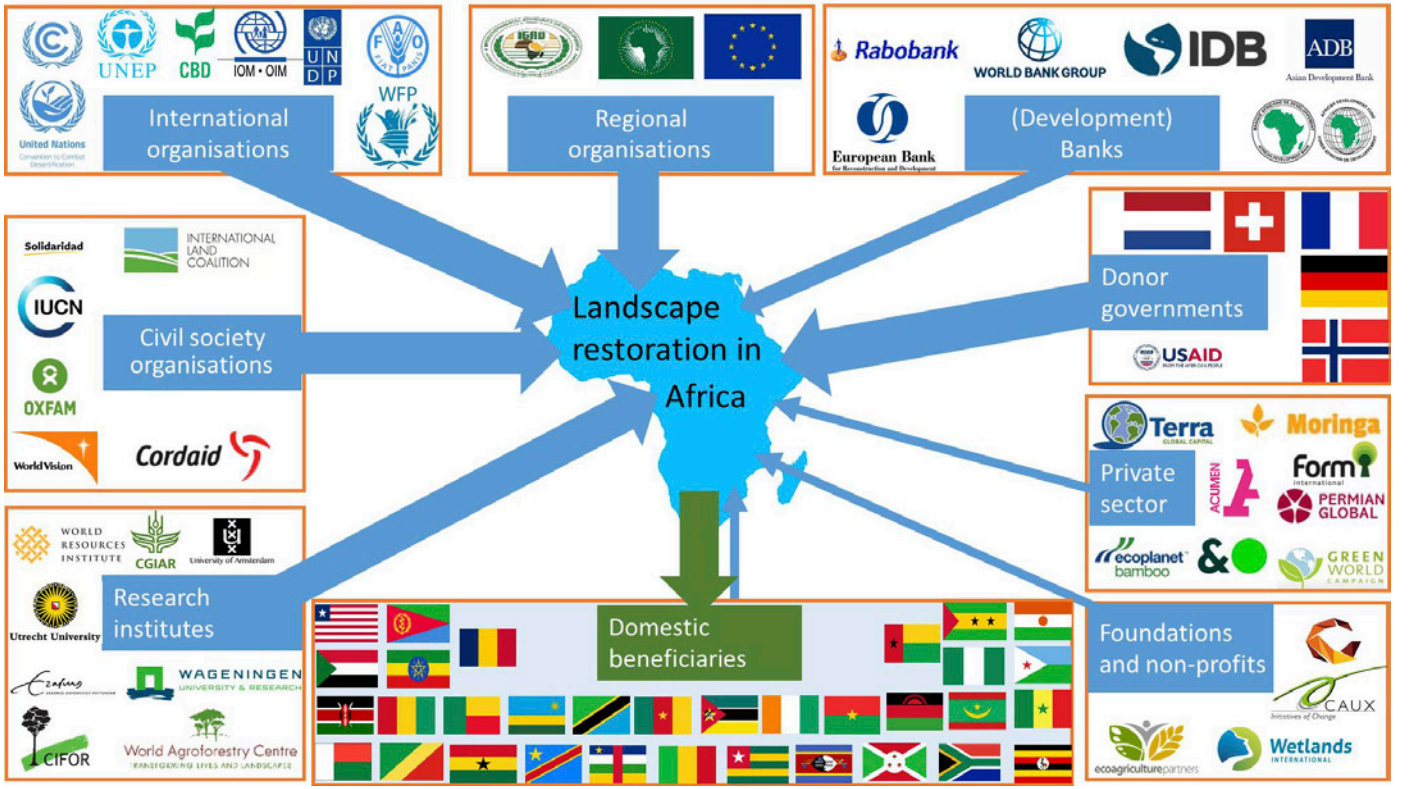
Landscape restoration initiatives are relatively small scale, involving a broad range of stakeholders in a long-term process.[80] A couple of individual 'stakeholder categories' can be identified in the field of landscape restoration in Africa (see Figure 3.1). Not all stakeholders play an equally large role; in particular, the private/financial sector, philanthropic foundations, Chinese investors and local farmers are rather absent from the initiating phase of landscape restoration initiatives. Moreover, not all initiatives specifically target migration, security and/or conflict. Below is a non-exhaustive overview of important stakeholders who are active in landscape restoration in Africa.

78 Cf GGW (2018). See sub-heading *improving millions of lives*. http://www.greatgreenwall.org/great-green-wall/#great-green-wall-internal (accessed February 2018).

79 GEF (n.d.). About us. https://www.thegef.org/about-us (accessed February 2018).

80 Cf Wentink, C. (2015). Landscape restoration: new directions in global governance: the case of the Global Partnership on Forest and Landscape Restoration and the Bonn Challenge, PBL Netherlands Environmental Assessment Agency. http://www.pbl.nl/sites/default/files/cms/publicaties/Landscape_restoration_WentinkC.pdf (accessed February 2018).

Figure 3.1 Stakeholder mapping. See Appendix 3 for a written list corresponding to the organisations included in this visualisation. NB This visualisation is non-exhaustive.



***Box 2.* Stakeholder example 1: Triple S (3S)[81]**

The aim of the 3S initiative 'Sustainability, Stability and Security' is to address the root causes of instability in Africa, particularly migration and conflict related to land and resource degradation. The UNCCD expects 375 million young Africans to enter the labour market by 2030,[82] but also that 60 million people are at risk of being forced to move from degraded land and 200 million people are experiencing severe water stress.[83] The objective of the 3S initiative is to create jobs for young people through the restoration of degraded lands, while also taking into account land access and tenure rights and establishing early warning systems to predict drought and other extreme climate events, in order to effectively respond to displacement of African populations. The objective is to create two million jobs and rehabilitate 10 million hectares by 2025. The initiative has been established at the margins of the UNFCCC COP22 in Marrakech, Morocco, by Senegal and Morocco and endorsed by African leaders at the 1st African Action Summit. A land restoration pilot project has, for instance, been launched in Agadez, Niger, aiming to restore at least 470 hectares of land, creating also 470 jobs for unemployed young people and migrants. Other 3S projects based on land restoration for the reintegration of vulnerable groups, including young people, migrants and women, are under development. Benin, Burkina Faso, Central African Republic, Chad, Gambia, Ghana, Mali, Niger, Nigeria, Senegal, Zambia and Zimbabwe have already set their restoration and employment targets, and are now moving into the resource mobilisation phase.

3.1.1 International organisations

For more than two decades, land degradation has been identified as a regional concern, especially in sub-Saharan African. The UN Convention to Combat Desertification (**UNCCD**), UN Framework Convention on Climate Change **(UNFCCC)** and the Convention on Biological Diversity **(CBD)** are addressing the issue at global level as part of the broader SDG, climate change and biodiversity agendas. Now, various other UN bodies are focusing on avoiding land degradation or restoring degraded land, especially after Rio+20 (2012) and the SDGs (2015) were successful in positioning land

81 UNCCD (n.d.). Sustainability, Stability, Security. https://www2.unccd.int/actions/sustainability-stability-security (accessed February 2018).

82 ILO (2016). Employment Working Paper No. 204. http://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_533993.pdf (accessed February 2018).

83 UNCCD (n.d.). Sustainability, Stability, Security.

degradation in a truly global perspective. This includes the UN Environment Programme **(UNEP)** and the UN Food and Agriculture Organization **(FAO)** as implementing agencies.

Although UN initiatives are sometimes aggregated, for example, by the **Global Environment Facility (GEF)** focusing on climate, biodiversity and land, they are also frequently fragmented. The different headings of landscape restoration by UN initiatives are in this sense symptomatic. For instance, the approach of 'sustainable land management' is very similar to 'landscape restoration' or 'rehabilitation'. Sometimes the initiatives of international organisations and multilateral agencies are more thematic. For example, the International Fund for Agricultural Development **(IFAD)** focuses on agricultural development, and **IOM** (International Organisation for Migration in United Kingdom) has a division on migration, environment and climate change (MECC). There are also intergovernmental science-policy forums such as the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services **(IPBES)** that assess the state of land degradation and restoration. The latest report identifies land degradation as a 'major contributor to mass human migration and increased conflict'.[84]

3.1.2 Regional organisations

Several regional intergovernmental organisations are also active in landscape restoration in Africa. These include especially the **African Union (AU)** and related technical bodies such as **New Partnership for African Development (NEPAD)**, often pooling efforts with stakeholders such as the World Bank. In addition, more geographically restricted regional intergovernmental organisations such as the **Intergovernmental Authority on Development in East Africa (IGAD)** and the **Economic Community of West African States (ECOWAS)** are particularly active. The **European Union (EU)** is also contributing to land restoration approaches as a regional organisation. However, EU involvement is akin to that of a donor government, and the EU also has a different objective. Whereas African regional organisations have a primary objective of increasing food security, EU initiatives are increasingly oriented towards addressing the root causes of irregular migration to Europe.

84 IPBES (2018). 'Media Release: Worsening Worldwide Land Degradation Now "Critical", Undermining Well-Being of 3.2 Billion People'. https://www.ipbes.net/news/media-release-worsening-worldwide-land-degradation-now-%E2%8%98critical%E2%80%99-undermining-well-being-32 (accessed April 2018).

3.1.3 Donor governments

Landscape restoration initiatives provide donor governments the opportunity to a long-term rural development commitment in specific African countries and regions. Recently, **Germany** has been active in land restoration through its development agency **GIZ** and is hosting many international environmental organisations, including UNFCCC and UNCCD, in Bonn. Moreover, the Bonn Challenge is one of the major global efforts to restore 350 million hectares of degraded land by 2030. Apart from the German government, **Norway**, **France**, the **United States** and **Switzerland** have also been active contributors to land restoration initiatives. The United States (USAID) in particular considers reducing migration risks to be one of the central objectives behind land restoration. However, Germany and France seem to have different central objectives behind their land restoration initiatives – climate change and biodiversity/food security respectively.

3.1.4 Civil society organisations

The issue of landscape restoration has been taken up by many civil society organisations (CSOs), with different objectives but mostly in connection with local communities and environments in Africa. The **International Union for the Conservation of Nature (IUCN)** has been spearheading initiatives such as the Global Partnership on Forest and Landscape Restoration. IUCN has also been working with the World Resources Institute to develop a methodology for the assessment of restoration opportunities[85] and has autonomously set up a 'Barometer' on the implementation of the Bonn Challenge.[86] Other active CSOs include **World Vision**, **Solidaridad**, **WWF**, **Justdiggit**, **Oxfam** and **Cordaid**, of which the latter in particular has objectives related to security and migration. CSOs also aggregate efforts in the **International Land Coalition**, a global alliance that includes farmers' organisations, UN agencies and research institutes, with land tenure and (women's) land rights as its core focus.[87]

85 IUCN and WRI (2014). A guide to the Restoration Opportunities Assessment Methodology (ROAM): Assessing forest landscape restoration opportunities at the national or sub-national level, working paper. https://cmsdata.iucn.org/downloads/roam_handbook_lowres_web.pdf (accessed March 2018).

86 IUCN (19 December 2017). 'PRESS RELEASE – IUCN launches first Bonn Challenge Barometer report highlighting restoration progress'. https://www.iucn.org/news/forests/201712/press-release-%E2%80%93-iucn-launches-first-bonn-challenge-barometer-report-highlighting-restoration-progress (accessed Mar, 2018).

87 See http://www.landcoalition.org/

***Box 3.* Stakeholder example 2: AFR100**

AFR100 (African Forest Landscape Restoration Initiative) is a country-led effort to bring 100 million hectares of deforested and degraded landscapes across Africa into restoration by 2030. Part of its success has been due to political endorsement and high-level commitment to the initiative: 26 countries have already committed to more than 80 percent of the target. Many African presidents and ministers signed up to the initiative. NEPAD, the technical body of the African Union, functions as the secretariat for AFR100, which contributes to African ownership of the initiative. AFR100 is a partnership of NEPAD, World Bank, IUCN, FAO, GEF, Germany's Federal Ministry for Economic Cooperation and Development (BMZ) and the World Resources Institute. The objective behind AFR100 is to capture benefits for food security, climate change resilience and poverty alleviation, and to contribute to the SDG target of Land Degradation Neutrality, the Bonn Challenge and the New York Declaration on Forests. Migration, security and unemployment objectives do not feature specifically in AFR100's target. In Rwanda and Mozambique, AFR100 has already led to some concrete restoration implementation activities. Finance has been mobilised through the World Bank (1 billion USD) and financial impact investors (481 million USD).

3.1.5 (Development) Banks

The **World Bank** supports an integrated landscape approach for sustainably managing land, water and coastal resources. The World Bank is involved in African initiatives such as AFR100 (see Box 3), the Great Green Wall for the Sahara and the Sahel (see Box 4) and TerrAfrica (see box in Chapter 4). The **Netherlands Development Finance Company (FMO)** recently became a partner with the Dutch 'Forests for the Future – New Forests for Africa' initiative.[88] The **African Development Bank** is also active. Other development banks are more active in renewable energy and agriculture projects. The more commercial banks are active in landscape restoration, especially **Rabobank**, a cooperative bank for farmers which is based in the Netherlands.

88 FMO (21 January 2016). New forests for Africa. https://www.fmo.nl/news-detail/a168a275-279e-485b-b46d-2077b0e453cf/new-forests-for-africa (accessed February 2018).

Box 4. Stakeholder Example 3: Great Green Wall Initiative

The Great Green Wall Initiative for the Sahara and the Sahel is one of the large African-led initiatives for forest and landscape restoration. Its ambition is huge, namely to restore 8,000km of land to provide food, jobs and a future for the millions of people who live in this climate change-affected region. The Sahel has a population of 100 million, mostly very poor people. Since 1985, more than 200 million trees have been planted in the Sahel, restoring more than five million hectares of land.[89] The Great Green Wall Initiative itself was launched in 2007. The Great Green Wall is an African Union programme bringing together more than 20 African countries. It is backed by many international and regional organisations such as the FAO, UNCCD, European Union, ECOWAS, IGAD, UNDP, UNEP, the World Agroforestry Centre, the Belgian Walloon region and the World Bank.[90] More than 8 billion USD has been mobilised through GEF in support of the initiative. The effect of this project on migration is still in question; some donors hope to reduce migration by restoring land, although some experts believe it might actually lead to an increase in migration in the short and medium term because people are better off financially.[91]

3.1.6 Private sector

There are only a limited number of restoration projects in which the financial sector is involved. The decadal long-term financial needs and low return on investment in the first years might explain this low level of involvement. These factors, accompanied by high risks, may not be suitable to the business models of the private and financial sector. Several private projects were observed, for example under the umbrella of AFR100, e.g., **Ecoplanet Bamboo**, **Green World Ventures**, **Moringa Partnership**, **Permian Global**, **Form International**, **Terra Global Capital**, **Acumen**, and **Green Fund**.[92]

89 Reij, C., Tappan, G. and Smale, M. (2009). 'Agroenvironmental transformation in the Sahel: Another kind of Green Revolution', IFPRI. http://www.ifpri.org/publication/agroenvironmental-transformation-sahel (accessed February 2018).

90 See http://www.greatgreenwall.org/great-green-wall/

91 Filipovic, J. (19 July 2017). 'Will Africa's Great Green Wall discourage migration to Europe?', *The Guardian*. https://www.theguardian.com/global-development-professionals-network/2017/jul/19/will-africas-great-green-wall-discourage-migration-to-europe (accessed April 2018).

92 http://afr100.org/content/financial-partners

The domestic private and financial sector in African countries is also less involved. The private sector commitment to landscape restoration initiatives is especially driven by the **New York Declaration of Forests** as well as by the **REDD+** commitments.[93] Forest and landscape restoration can lead to many economic benefits.[94] In practice, **very large companies (e.g., mining, timber, paper and pulp, agribusiness)** contribute positively to restoration approach through REDD+ involvement[95] but also (more negatively) to large-scale land-acquisitions,[96] or 'land grabs', of hectares dedicated to food, timber and biofuel crops, likely to cause considerable displacement and involuntary migration.[97] The interviews conducted for this research project point to an increasing interest by the private sector (e.g., impact investors and eventually larger institutional investors and pension funds) to explore the relation between land degradation, restoration and conflict/migration. The larger companies with stark influence in supply chains can provide a missing link to scale up the current small ODA-driven projects towards smallholders.

93 The New York Declaration on Forests, signed by multinational companies such as Johnson & Johnson, Unilever, Nestle and McDonalds, see UN (23 September 2014). Forests: Action Statements and Action Plans. http://www.un.org/climatechange/summit/wp-content/uploads/sites/2/2014/07/New-York-Declaration-on-Forest-%E2%80%93-Action-Statement-and-Action-Plan.pdf; For a more regional African perspective on REDD+ contributions to landscape restoration and rehabilitation, see Rossi, V et al. (2017). Could REDD+ mechanisms induce logging companies to reduce forest degradation in Central Africa?. *Journal of Forest Economics*, 29, pp. 107-117.

94 WRI (2017). Financial Returns from Restoration, Infographic. http://www.wri.org/resources/data-visualizations/financial-returns-restoration (accessed February 2018).

95 EUREDD Facility (2014). Working with the private sector on REDD+. http://www.euredd.efi.int/documents/15552/154912/Working+with+the+private+sector+on+REDD%2B/f7c02847-ebd9-4656-aafc-3a2857d905e9 (accessed February 2018).

96 http://www.landmatrix.org/en

97 UNCCD (2017) Global Land Outlook: First Edition, p. 12 and p. 84.

***Box 5.* Stakeholder example 4: Rabobank 'Kickstart Food'**[98]

Rabobank is collaborating with UN Environment to engage in a global programme that targets the sustainable food supply, with the aim of accelerating the transition towards reaching SDG2 (zero hunger). Among the first steps to be taken is the establishment of a 1 billion USD facility for the initiation of forest protection and land restoration initiatives. The Kickstart Food initiative focuses on four key areas: 'Stability' aims to create a more resilient and stable agriculture and food sector; 'Waste' focuses on reducing supply chain incurred food waste; 'Nutrition' focuses on balanced and healthy diets; and finally, 'Earth' for food production that is sustainable and environmentally friendly. The programme targets contribute to the UN Sustainable Development Goals, with a primary focus on increasing food production and reducing the food production environmental footprint, among others. According to Rabobank Chairman of the Executive Board, Wiebe Draijer, Rabobank aims to use its 'knowledge, networks and financing capabilities… to further motivate and facilitate clients in adopting a more sustainable food production practice globally'.

3.1.7 Foundations and non-profit organisations

The process of landscape restoration requires loyal, long-term investors, as it usually takes more than a decade to restore land. In that sense, it is striking that philanthropic foundations are notably absent in the field of forest and landscape restoration. There are some implementing foundations such as **Commonland** and non-profits such as **EcoAgriculture Partners** involved. Larger philanthropic foundations tend to invest in agriculture, health and renewable energy projects more than land restoration initiatives. Specifically on migration and security, the work of the **Caux Initiatives of Change Foundation**, with its annual Caux Dialogues, contributes to the knowledge and feeling of urgency on land degradation, migration and security.

98 Rabobank (16 October 2017). 'Rabobank and UN Environment kick-start $1 billion program to catalyze sustainable food production'. https://www.rabobank.com/en/press/search/2017/20171016-kickstart-food.html (accessed February 2018).

3.1.8 Research institutes and think tanks

Across the globe, much research on how to avoid land degradation or to restore degraded lands has been pursued. Among the most influential research centres are the Center for International Forestry Research **(CIFOR)**,[99] also initiator of the **Global Landscape Forum**, the **World Agroforestry Centre** and **CIAT** (**CGIAR** research centres), and the **World Resources Institute (WRI)** is partnering with IUCN and is interested in scaling up restoration initiatives in Africa, specifically contributing with data and visualisations.[100] **Wageningen University and Research (WUR)** stands out as a large university conducting research in the fields of forestry, climate, food security and development co-operation. Research contributions also come from France, for example the **Institute de Recherche pour le Développement**[101] and the **Montpellier Panel**.[102]

3.1.9 Domestic beneficiaries

Last, but certainly not least, domestic beneficiaries of landscape restoration initiatives could be considered a broad stakeholder category involving **national African governments**, **indigenous groups**, **farmers**, **foresters**, **women**, **pastoralists and indigenous and local communities**. Land restoration initiatives might be more successful by taking a community-based resource management approach. However, although identified as one category, there are often many conflicts between these domestic beneficiaries, especially on land rights and the use of traditional ecological knowledge. Because Africa has significantly more community land than any other continent, many land rights and tenure issues come together on the continent, affecting specifically women, indigenous people, pastoralists and farmers. On a positive note, countries such as Burkina Faso have proved to be important partners, promising to invest many domestic resources into sustainable agriculture.[103] Moreover, African political commitment to restoration initiatives such as AFR100 and the 3S Initiative is increasing (see Box 2) with ambitious commitments by countries such as Rwanda and Cameroon.

99 Cf Clark, R., Reed, J. and Sunderland, T. (2018). Bridging funding gaps for climate and sustainable development: Pitfalls, progress and potential of private finance. *Land Use Policy*, 71, 335-346.

100 Cf Ding, H. et al. (2017). Roots of prosperity: The Economics and Finance of Restoring Land. World Resources Institute. http://www.wri.org/sites/default/files/roots-of-prosperity.pdf.

101 For example, see their research input for UNCCD COP 13, at https://www.ird.fr/la-mediatheque/dossiers-thematiques/desertification-et-degradation-des-terres (accessed April 2018).

102 Montpellier Panel (2014). Une Mission Sustainable: Conserver, Restaurer et améliorer les sols d'afrique. Agriculture for Impact. https://ag4impact.org/wp-content/uploads/2014/12/MP_0176_Soil_Report_V2-French-Full-length.pdf (accessed April 2018).

103 IUCN (2015). Enhancing food security through forest landscape restoration: Lessons from Burkina Faso, Brazil, Guatemala, Viet Nam, Ghana, Ethiopia and Philippines.

In 2017 the 3S presidents supported the call for 'Action of Ouagadougou', which includes a commitment to advance 'land-based jobs for vulnerable groups' by implementing the 3S initiative.[104] Migration and security are linked, at least indirectly, to these conflicts between domestic beneficiaries of landscape restoration initiatives. One example is the Alliance for Sahel, which covers security and its link to rural development.[105] One can see conflicting objectives between domestic beneficiaries in Africa when aiming for restoration of degraded land. These obstacles and conflicting objectives are the focus of the next chapter.

104 UN Chronicle (October 2017). 'A Way Back'. https://unchronicle.un.org/article/way-back-0 (accessed February 2017).

105 EEAS (14 July 2017). 'Alliance for the Sahel will reinforce EU work for stability and development of key region'. https://eeas.europa.eu/headquarters/headquarters-homepage/29876/alliance-sahel-will-reinforce-eu-work-stability-and-development-key-region_en (accessed February 2017).

4 Project financing and scale-up potential: overview, challenges and opportunities

There are many prominent and promising landscape restoration projects in Africa. A table in Appendix 2 summarises the most prominent projects, their objectives and involved stakeholders. This section zooms in on the challenges and obstacles facing current landscape restoration projects, after which it discusses the potential to reduce migration and security risks in the region. In parallel, the synergy potential of how the migration/security perspective could add value to current landscape restoration approaches in Africa forms part of this analysis.

4.1 Obstacles and challenges

While contributing positively to local development, current landscape restoration approaches in Africa suffer face at least five obstacles and challenges that hinder the scaling-up potential:

1. trade-offs between objectives of landscape restoration
2. coordination and integration problems
3. long-term timescales of landscape restoration
4. lack of understanding, data and evidence for both projects and investors
5. local context.

First, the actual size and success of the projects depend on the *objectives* of landscape restoration, of which a few are contradictory. The competition for land between, for example, agriculture, (forest) conservation and restoration may result in poorly managed small- to medium-scale restoration projects, having the effect of inequality, displacement of communities and associated social problems.[106] The 'battle of objectives' is also clear when analysing the UN bodies responsible for and involved with landscape restoration approaches or similar. This includes institutions having objectives such

106 Latawiec, A. E., Strassburg, B. B., Brancalion, P. H., Rodrigues, R. R. and Gardner, T. (2015). Creating space for large-scale restoration in tropical agricultural landscapes. *Frontiers in Ecology and the Environment*, Vol. 13, No. 4, pp. 211-218. https://doi.org/10.1890/140052.

as food security (FAO), employment (International Labour Organization), carbon sequestration (UNFCCC), restoring degraded land (UNCCD), restoring biodiversity (CBD), tackling migration problems (IOM) and economic empowerment (World Bank), leaving aside other related objectives such as overcoming water scarcity, poverty eradication, women's empowerment or raising awareness of population growth or land tenure.

Potential areas of conflict between objectives include food security competing with biodiversity conservation and poverty reduction, and conflicts between international and national interests. As such, projects focused on addressing or reversing land degradation may be effective, but could also result in additional migration and displacement if not implemented in an integrated manner, for example, by not considering the rights of indigenous populations.[107]

Second, and also related, many projects (and their investors) suffer from *coordination and integration barriers*. These barriers include lack of awareness of other restoration projects, siloed organisation and financing, cumbersome processes and rigid funding guidelines, as well as activity alignment complexity.[108] An important effect of these coordination challenges is that funds have difficulty trickling down to local level, especially to farmers. Much money is being held at the top, either by international organisations or by national governments with many 'transaction costs', rather than at local level where investment is much more needed. Small-scale local farmers' and women's empowerment in decision making is one of the main challenges due to issues with land rights and tenure. Local communities currently often have little leverage (or advantage) in large-scale restoration projects.[109] Due to the small size and long-term notion of land restoration projects there is a lack of return of investment in the short term.

A third major difficulty for effective financing and upscaling of land restoration projects in Africa is that there is often lack of *long-term funding*. The Commonland Foundation, for instance, has a 20-year time horizon for a 'holistic restoration approach'.[110] Others point to the fact that in some cases, full restoration may actually not be feasible in

107 UK Government Office for Science (2011). Migration and Global Environmental Change, BIS/11/1116, p. 146.

108 European Climate Foundation, Clingendael Institute, Planetary Security Initiative (13 December 2017) Climate, Land, Migration and Peace: How to connect domains and scale-up action in Africa? Summary of the meeting (confidential).

109 Barr, C. M. and Sayer, J. A. (2012). The political economy of reforestation and forest restoration in Asia–Pacific: Critical issues for REDD+. *Biological Conservation*, 154, pp. 9-19. https://doi.org/10.1016/j.biocon.2012.03.020

110 Commonland (n.d.). 4returns. http://www.commonland.com/en/4returns (accessed January 2018).

decadal timescales, but needs centuries.[111] However, this depends on which baseline and objective is chosen. It is often necessary to 'give the land a break' and this comes along with short-term costs. Patient long-term funders are needed, while these funders themselves could get higher short- and medium-term return of investment in agriculture or clean energy projects, for example. Philanthropic foundations and the (domestic and international) financial sector could play a much larger role.[112] Moreover, domestic budgets could be augmented through taxes, such as in Costa Rica. Remittances could also be invested in land restoration projects and one could think of net benefits for local communities such as 'cash compensation'. Moreover, other international public financers could be aligned in the discussions. For example, China might be interested in transferring their successful Loess Plateau example of landscape restoration to African regions.

A fourth challenge for landscape restoration projects is that they are often based on *lack of understanding, lack of reliable data and lack of empirical evidence*. This can be a problem for local people and investors because high uncertainty is accommodated with high risk, which can lead to an unwillingness to invest. At local level, this often means that people lack basic knowledge of soil processes, with land mismanagement practices as one of its effects. In some countries, such as drought-affected Mali, barely 30 percent of the population are literate, dropping as low as 5 to 10 percent in the drylands.[113]
At policy level, there is a lack of accurate data on land degradation, which has only been resolved recently by a PBL assessment in 2017 for the Global Land Outlook.[114] There is also incomplete knowledge regarding degradation thresholds and recovery potential.[115] This also means that a robust assessment of land degradation neutrality (SDG target 15.3) is highly unlikely, as there is no baseline assessment of ecosystem change.
The 'politics of data' relate not only to land degradation but also to population growth and migration in Africa.[116] Also, in the SDGs, the issue of migration, let alone population

111 Benayas, J. M. R., et al. (2009). Enhancement of biodiversity and ecosystem services by ecological restoration: a meta-analysis, *Science*, Vol. 32, No. 5944, pp. 1121-1124. DOI: 10.1126/science.1172460.

112 Cf Sewell, A., Bouma, J. and Van der Esch, S. (2016) Investigating the challenges and opportunities for scaling up ecosystem restoration, background report, PBL Netherlands Environmental Assessment Agency who identify 'two key challenges in scaling up investments in ecosystem restoration (ESR) – financing and coordination'.

113 UNCCD (2017). Global Land Outlook, p. 256.

114 Esch, S. van der, et al. (2017). Exploring future changes in land use and land condition and the impacts on food, water, climate change and biodiversity: Scenarios for the UNCCD Global Land Outlook, PBL Netherlands Environmental Assessment Agency; Before this assessment, the attempt to assess land degradation was only conducted in the 1990s, see Schaik, L. van, Dinissen, R. (2014) Terra Incognita.

115 UK Government Office for Science (2011). Migration and Global Environmental Change, BIS/11/1116.

116 In 1980 FAO and UNFPA launched an 'expert consultation on land resources for populations of the future'. However, there have not been any recent accounts to identify critical areas where land resources might be insufficient to support future populations and where action is urgently required to rectify this situation.

growth, does not feature prominently in its goals and targets.[117] With regard to migration, reliable data remain scarce, particularly for internal migration.[118] Moreover, it is yet too early to evaluate the effects of various (EU) arrangements to stem the flow of migrants and tackle irregular migration, security and conflict risks in Africa.

A fifth obstacle for large-scale implementation of land restoration projects in Africa is that the effectiveness of responses to halt or reduce land degradation and to restore degraded land are highly dependent on the *local context*. This includes biophysical as well as social, economic and political settings. To a large extent, the institutional and governance systems in place define the effectiveness of policy instruments. Because many projects revolve around and get stuck at supporting regulations, land tenure and land rights it is clear that the enabling regulatory environment is one of the biggest challenges for effective land restoration projects. Stakeholder participation at local level should, in parallel, be improved – taking into account the local context and guaranteeing tenure rights to local people.[119]

4.2 Opportunities for landscape restoration approaches contributing to migration and security objectives

As outlined above, landscape restoration initiatives in Africa are relatively more often on a local or national scale, involving a broad range of stakeholders in a long-term process.[120] These initiatives are mostly fragmented and sometimes incoherent, potentially opening up new lines of conflict.[121] To aggregate the project size, attract larger investments and tackle migration and conflict objectives, it is necessary to look for synergies and a more coherent landscape restoration approach. How can migration and security perspectives benefit landscape restoration approaches, and vice versa?

117 For an in-depth overview of the SDG goals and targets that relate to migration, see UNDESA Population Division. (2015). Integrating migration into the 2030 Agenda for Sustainable Development, No 2015/5. http://www.un.org/en/development/desa/population/migration/events/coordination/14/documents/backgrounddocs/GMPA_14CM.pdf.

118 UNCCD (2017) Global Land Outlook: First Edition, p. 96.

119 Mansourian, S. and Vallauri, D. (2014). Restoring forest landscapes: important lessons learnt. *Environmental management*, Vol. 53, No. 2, pp. 247-248. https://doi.org/10.1007/s00267-013-0213-7.

120 Cf Wentink, C. (2015) Landscape restoration: new directions in global governance: the case of the Global Partnership on Forest and Landscape Restoration and the Bonn Challenge, PBL Netherlands Environmental Assessment Agency.

121 In Mali, ODA projects on sedentary agriculture and agricultural land saw herders' pastures diminished, which led to interethnic violence in some cases; see Ursu, A.E. (February 2018) Finding justice amidst insecurity: Policy initiatives to strengthen customary justice systems and mitigate conflicts in Central Mali, Policy Brief, Clingendael CRU.

First, migration, security and land restoration have '*political momentum*'. This can be seen, for example, in SDG 15, to '(..)combat desertification, and halt and reverse land degradation'.[122] The 'One Planet Summit' in Paris in December 2017 led to a Land Degradation Neutrality Fund.[123] African leaders up to the highest level have committed themselves to restoration targets and there are a few African-led initiatives (some of which are integrated into the Bonn Challenge), for example the 3S Initiative, AFR100 and the Great Green Wall Initiative. Some of them are directly related to migration.

As for migration, many EU programmes and accompanying large-scale funding address irregular migration and conflict and security risks. International security is increasingly connected to land degradation, especially at UN level. The UN Security Council recognises the adverse effects of climate change and ecological changes on the stability of, for example, West Africa and the Sahel, including through land degradation.[124] The World Bank recently concluded that there is potential for upward trends in the number of climate migrants until 2050, with an emergence of 'climate migration hotspots' across the landscape.[125] Although the African continent is full of opportunities for landscape restoration,[126] this is often not part of the (negotiations of these) agreements (yet). These two issues of 'high politics' should be connected in order to catalyse political momentum into action on the ground. It would then offer a long-term perspective on currently strained relations between European and African countries, by combining urgent and politically salient issues.

Second, on a substantive level, the migration, security and unemployment perspectives could be the missing links between the objectives and small projects that currently drive landscape restoration approaches in Africa. As such, it could propel, accelerate and scale up the rate of landscape restoration. There is indeed a strong link between

122 UNSTAT (n.d.). Sustainable Development Goal 15, Life on Land. https://unstats.un.org/sdgs/report/2016/goal-15/ (accessed March 2018).

123 UNCCD and Mirova (12 December 2017) 'Press release: New fund initiative hailed as an innovative climate solution at one'. https://www.oneplanetsummit.fr/IMG/pdf/2_land_degradation_neutrality_fund-press_release-en.pdf (accessed April 2018).

124 UNSC (30 January 2018). Presidential Statement, SC/13189, 8170th meeting on security, migration and the Sahel; Cf Davitti, D. and Ursu. A. (January 2018). Why Securitising the Sahel Will Not Stop Migration, FMU Policy Brief No. 02/2018. https://www.clingendael.org/sites/default/files/2018-01/PB_Why_securitising_Sahel_won%27t_stop_migration.pdf (accessed February 2018).

125 Rigaud, K.K., de Sherbinin, A., Jones, B. et al. (2018). Groundswell: Preparing for Internal Climate Migration. World Bank, p. 73, World Bank, Washington DC. http://hdl.handle.net/10986/29461.

126 GPFLR, WRI, SDSTATE, and IUCN (2011). A World of Opportunity. http://www.forestlandscaperestoration.org/sites/default/files/resource/4._bonn_challenge_world_of_opportunity_brochure_2011-09.pdf (accessed February 2018).

environmental pressures, conflict and migration.[127] Land degradation and soil erosion could contribute to increasing migration and conflict pressures, taking into account the rapidly growing (urban) population in sub-Saharan Africa. On the other hand, the impact of migration on land could be positive, as migration from rural to urban areas can result in flows of money, technology and information back to rural areas.[128] As for now, this would be a new 'frame' to connect the issues of migration and land degradation (and restoration) in practice, but with much potential.

Bring in the Dutch?

Until recently, the Netherlands has not been one of the donor governments that has invested massively in landscape restoration initiatives in Africa, although it supports initiatives such as TerrAfrica and the African Landscapes Action Plan. Its limited involvement manifests itself, for instance, in the fact that the country has not signed up to initiatives like the Bonn Challenge. Nevertheless, the Netherlands could make a complementary contribution to existing landscape restoration initiatives (and has already done so via IDH's ISLA programme based initially on commodity supply chains). As a genuine donor government, combining private sector development and international cooperation, the Netherlands could assist in bringing exactly these missing elements into current initiatives. In fact, Dutch knowledge centres, notably Wageningen University and Research, but also Erasmus University, University of Amsterdam and Utrecht University, PBL Netherlands Environmental Assessment Agency, CSOs and foundations have already been heavily involved in the research of landscape restoration initiatives without much central government involvement. The Netherlands is also one of the biggest agricultural producers in the world and has links to many commodity supply chains. As such, the country's existing knowledge base is at a mature level. Moreover, the typical Dutch 'polder model' of engaging multiple public and private stakeholders in a combined institutional space could add value to the fragmented field of landscape restoration. Therefore, new energy from the Dutch could indeed contribute to alignment with migration, security and unemployment objectives and synergy of restoration initiatives. The Netherlands could also use its mediating role in the UN Security Council or other UN forums such as UNDP.

127 Schaik, L. van, Bakker, T. (2017). Climate-migration-security: making the most of a contested relationship, Policy Brief, Planetary Security Initiative, Clingendael Institute – Cf UK Government Office for Science (2011). Migration and Global Environmental Change, BIS/11/1116.

128 UNCCD (2017). Global Land Outlook: First Edition, p. 230.

Third, tackling the issue of land degradation by means of restoration could have long-term positive effects on migration drivers and security risks; a solution currently not taken into account (to the fullest) while land degradation and migration are often 'closely interconnected processes'.[129] Degraded soil and cropland can indeed be restored effectively through more sustainable land management practices, including conservation agriculture and agroforestry. These practices could become part of any solution aiming to overcome involuntary migration and conflict risks. When taking the decadal timescale of land restoration into account, initiating these approaches as soon as possible is crucial in order to overcome conflict and migration challenges in the medium- to long-term future. Investment in landscape restoration initiatives might also be less expensive than current security measures, countering the 'pervasive tendency' to address migratory flows in Africa as a security concern only.[130] Technological innovation, capacity building and more efficient land management might prevent a shortage of productive land in Africa.[131]

4.3 Knowledge gaps

While integration of land restoration with migration and security interventions looks promising, there are still some unanswered questions.

First, there needs to be more political-economic institutional analysis of current landscape restoration approaches as well as their effects on migration, security and unemployment in the *short, medium and long term*. Because land restoration approaches take time, sometimes even decades, it is crucial that short-term action to mitigate (planetary) security risks are also considered, including the need for good planning and decision making around resettlement.[132]

Second, the relationship between land degradation, conflict and involuntary migration seems *not deterministic but mediated* by other factors, including social-economic, biophysical and institutional factors. This complex relationship needs further exploration, taking into account local contexts.

Third, scholars need more support to explore these relationships, as nowadays they are '*wary of drawing links* between environmental change and human migration' due to fears

129 Ibid, p. 96.

130 Davitti, D. and Ursu. A. (January 2018). Why Securitising the Sahel Will Not Stop Migration.

131 Lambin, E. F. and Meyfroidt, P. (2011). Global land use change, economic globalization, and the looming land scarcity, *Proceedings of the National Academy of Sciences*, Vol. 108, No. 9, p. 3465-3472.

132 UK Government Office for Science (2011). Migration and Global Environmental Change, BIS/11/1116, p. 146.

of facing criticism from colleagues, while policy makers, the military and governments are increasingly treating this phenomenon as a (perceived) reality.[133]

Fourth, given the expected *doubling of the population* in 26 African countries between 2018 and 2050, there is a need for further research on the impact this demographic shift might have on land degradation and on rural-urban (internal) migration, forced migration, (resource) security, and conflict.

Fifth, *quantitative assessments* of land restoration's impact on reducing migration, by offering a perspective not to leave or to return to the countryside in countries of origin, are needed. It would also be necessary to demonstrate how this policy option compares to other options to reduce migration, such as creating employment in urban areas or repressive measures to halt migration.

Finally, it is also crucial that the potential in improved *coordination* and *integration* is used to *create synergy* between the different landscape restoration objectives and to address current finance gaps. As such, while land restoration is intended to contribute to many SDGs, including SDG target 15.3, it is now especially crucial to take SDG 17 on multi-stakeholder partnerships into account. Landscape restoration initiatives are seen as one of the 'holy grails' of development and many donor governments and international organisations try to fill this gap. This also holds true for businesses. The global potential for landscape restoration has been visualised by the World Resources Institute and IUCN. However, landscape restoration initiatives seem *fragmented*. A more careful inclusion of the financial sector, philanthropic foundations, the financial and security perspectives of local communities, and contributions from remittances might improve and *scale up* current efforts. Including the migration and security perspective might help to catalyse political momentum and contribute to a genuinely integrated landscape approach on the ground that takes into account all pressures on land use.

133 UNCCD (2017). Global Land Outlook: First Edition, p. 93.

5 Conclusions

In our analysis we found that despite limited evidence on a statistically proven causal relationship between climate-induced land degradation and irregular migration, some land restoration projects are already using the premise that they play a positive contribution to European migration policy objectives and stability. We found that particularly in drylands, there are countless academic findings and observations from case studies that permit the assumption that land degradation is an important driver of varying forms of migration, food and water scarcity, and conflict risk. Drylands are the last land-stage prior to desertification and are therefore highly vulnerable to climate-induced land degradation.

A large percentage of Africa's population consists of vulnerable communities who live on drylands and are highly dependent on its productivity for basic livelihood. With the population in Africa expected to double before 2050, these stressors on land use and land degradation are expected to intensify, highlighting a need to focus on addressing land degradation neutrality. Building on this contextual basis, the central question of this report is: to what extent do landscape restoration initiatives have the potential to address migration and security objectives in Africa?

Migration is a politically sensitive topic, and its inclusion in forums on landscapes can find steep opposition. For instance, there is no commonly accepted definition of an environmental migrant or climate refugee, which symptomises the fear to place climate-induced migration on the multilateral agenda. This analysis moved beyond this contested debate by conducting an in-depth analysis on the missing links between land degradation and security, conflict and migration. Our analysis found that we have progressed through three phases, namely scholarly debate, field observations and institutional recognition. And, we are currently observing a push to a fourth phase: moving towards action.

The link between land degradation and security is now more politically accepted. In 2017 and 2018 the United Nations Security Council acknowledged the link between land

degradation and instability in the overlapping Lake Chad, Sahel Region and West Africa and called for significant humanitarian and development action.[134]

On the surface it appears that ample action is being taken through the implementation of landscape restoration projects in Africa. However, when our analysis progressed into deeper layers we found that many projects are at local or national scale, listed under the umbrella of several flagship initiatives (e.g., Great Green Wall, 3S and AFR100) involving a broad range of stakeholders. Many projects were found to experience significant coordination and integration barriers regarding access to finance and knowledge. Moreover, signals hint to a demand for novelty and innovation in the landscape approach; notably in the 2017 UNCCD *Global Land Outlook* it was mentioned that ambitious restoration targets 'cannot be achieved with the business-as-usual approach limited to tree planting projects'.[135]

We discovered that projects usually have a wide range of objectives (employment, food security, climate, biodiversity, etc), which, in combination with the many financing stakeholders and domestic beneficiaries, often leads to conflicting interests. Projects were often observed to operate in a siloed manner, and synergies have been mostly observed through partner projects which fall under greater umbrella initiatives.

The vast majority of projects were noted to be dependent on official development assistance (ODA). On the contrary, investments made by African governments, Chinese investors, the private sector and philanthropic foundations are limited. Drawing in these sectors, for instance by creating ODA-backed funds to mitigate the risks of investments, could possibly generate opportunities towards expanded action. There is also a need to orient environmental funds (such as the Green Climate Fund, Global Environment Facility, Adaptation Fund, and the Least Developed Countries Fund) towards migration and stability.

Finally, we found that landscape restoration is a process of longevity. Restoring landscapes to a certain desired state may take years or even decades, especially at certain stages of desertification. This hints towards the need to set short-term,

134 See UNSC (31 March 2017). Resolution 2349, S/RES/2349(2017). https://undocs.org/S/RES/2349(2017) (accessed February 2018). And also see UNSC (30 January 2018). Statement by the President of the Security Council, S/PRST/2018/3. http://www.un.org/en/ga/search/view_doc.asp?symbol=S/PRST/2018/3. Calls for action stemmed from the Planetary Security Initiative as well. The call for action on 'the linked risks of climate change and security' was featured in the recent Hague Declaration on Planetary Security, which received endorsement by key representatives from public, private and civil society sectors; see Planetary Security Initiative (2017). Hague Declaration on Planetary Security. https://www.planetarysecurityinitiative.org/sites/default/files/2017-12/The_Hague_Declaration.pdf.pagespeed.ce.QjjTUyjl3f.pdf

135 UNCCD (2017) Global Land Outlook, p. 301.

intermediary and long-term landscape restoration goals in order to meet the interests of varying stakeholders.

5.1 Recommendations

Building on this report, we conclude this report with the following recommendations:

- We recommend using a long-term and integrated perspective for landscape restoration such as a 'Marshall Plan for Africa', taking into account short- and medium-term risks such as a rise in migration and unemployment in certain regions. Existing dialogues between Africa and the EU could be used as a starting point, but such a Marshall Plan should also try to engage China as a new and very active donor in Africa as well as ensure local ownership and private sector contributions. This would allow for long-term communication as well as short-term objectives, including an assessment of trade-offs at a landscape scale and its effects. This also takes into account the fact that sustainable approaches to land management can pursue multiple objectives within the managed landscape.[136]
- To move beyond dependency on ODA, we recommend blending international public finance with long-term private finance (philanthropy, remittances) as well as domestic contributions from African governments. The larger companies with strong influence in supply chains can provide a missing link to scale up the current small ODA-driven projects oriented on smallholders.
- New energy from the (until now notably absent) Dutch government could contribute to alignment with migration, security and unemployment objectives and synergy of restoration initiatives. The Netherlands could also use its mediating role in the UN Security Council.
- The debate on food security in drylands affected by climate change needs to be explicitly connected to mainstream security and migration discussions, such as the Global Compact for Migration.
- With some signals of doubt from the international community on the links between land degradation/restoration and conflict/migration/security, we identified an opportunity to invest in survey-based research to take stock of the actual drivers of this nexus, and the potential of land restoration to offer positive perspectives to returning migrants and to people thinking of leaving or joining terrorist groups because their livelihoods are at risk.
- We can still benefit from more (quantitative) evidence on the land degradation and security/migration/conflict nexus, but should not use this to delay action on the ground. In light of the population growth forecasts in the Sahel, vast opportunities for landscape restoration and high likelihood of interventions being a win-win-win

136 UNCCD (2017) Global Land Outlook, p. 202.

for the economy, poverty reduction, climate objectives and migration and security objective, it makes no sense to wait.

- Periodic mapping of stakeholders is advisable, since it can help to eliminate overlapping initiatives, communicate information to active programmes to stakeholders, and ensure more efficient use of funds. For instance, it can identify additional funding opportunities in the direction of landscape restoration, renewable energy and climate change management, and deepen insight into the magnitude of current investments.

Appendix 1: List of interviewees

Confidentiality agreement with Ministry of Agriculture, Nature and Food Quality

Name	Organisation	Date interview
Machteld Schoolenberg	PBL	12-12-2017
Hartmut Behrend	GIZ	13-12-2017
Barbara Bendandi	UNCCD	13-12-2017
Patrick Worms	World Agroforestry Centre	20-12-2017
Markus Ihalainen	CGIAR	20-12-2017
Tim Christophersen	UNEP	20-12-2017
Martin Frick	UNFCCC	20-12-2017
Cas Besselink	IUCN	29-1-2018
Frederique Holle	IUCN	29-1-2018
Willem Ferwerda	Commonland	5-2-2018
Caroline van Tilborg	Commonland	5-2-2018
Bas Ruter	Rabobank	13-2-2018

Participant list, ECF side-meeting, Planetary Security Initiative, 13 December 2017

Participant	Function	Organisation
Aliou M Dia	Head of the Disaster Risk Reduction and Climate Change team	UNDP Addis Ababa
Ayan Mahamoud	Platform Coordinator for Regional Programming	IGAD
Barbara Bendandi	Policy Officer	UNCCD
Bas Rüter	Director of Sustainability	Rabobank
Bert Metz	ECF Fellow	European Climate Foundation
Carola van Rijnsoever	Director Inclusive Green Growth Department	Netherlands Ministry of Foreign Affairs
Coenraad Krijger	Director	IUCN & Leaders for Nature network
Hartmut Behrend	Project Leader for Adaptation to Climate Change	Germany, GIZ
Ibrahim Togola	Renewable Energy and Business Development Specialist	Mali
John Dennis Liu	Environmental Filmmaker	Commonland
Joost de Laat	Director of Learning and Evaluation	Porticus
Kitty van der Heijden	Director WRI Europe	World Resources Institute
Louise van Schaik	Head Sustainability Centre/Senior Research Fellow	The Clingendael Institute
Marieke Rodenhuis	Manager of Grants	Nationale Postcode Loterij
Michel van Winden	Strategic Advisor Inclusive Green Growth Department	Netherlands Ministry of Foreign Affairs
Monika Sie Dhian Ho	Managing Director	The Clingendael Institute
Pascal Delisle	Climate and Global Issues Adviser / Manager Green Diplomacy Network	European External Action Service
Randall Purcell	Senior Advisor – Agenda 2030	World Food Programme
Rebecca Collyer	Director of the Power Programme	European Climate Foundation
Ries Kamphof	Visiting Research Fellow	The Clingendael Institute
Stefano Sarris	Research Assistant	Planetary Security Initiative

Appendix 2: List of most prominent landscape restoration initiatives

Flagship projects and initiatives	Organisation	Funders	Budget	Active in	Main objective
AFR100 – the African Forest Landscape Restoration Initiative	Secretariat: NEPAD. Many partners, see: http://afr100.org/content/technical-partners	Public financial partners * Germany's BMZ, GEF, WBG	$1 billion public sector funds	Benin, Burundi, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Ethiopia, Ghana, Guinea, Kenya, Liberia, Madagascar, Malawi, Mozambique, Niger, Republic of Congo, Republic of Sudan, Rwanda, Senegal, South Africa	AFR100 is a pan-African, country-led effort to bring 100 million hectares of land across Africa into restoration by 2030. AFR100 commitments also support the Bonn Challenge, the New York Declaration on Forests, and the African Resilient Landscapes Initiative (ARLI).
AFR100 – Private Project	Ecoplanet Bamboo	Ecoplanet Bamboo	$175 million by 2020	Ghana, South Africa, Rwanda	Coupling conversion of degraded land into certified bamboo plantations with innovative technology development to provide bamboo-based solutions for products and markets that contribute to deforestation.
AFR100 – Private Project	Green World Ventures	Green World Ventures	Not available	Kenya, Ethiopia	Establishing a 'regenerative food industry' based on cultivation and processing of moringa oleifera, a fast-growing drought-tolerant, high-protein tree-crop. A central goal is to bring commodity-level protein to the global protein supply.

Flagship projects and initiatives	Organisation	Funders	Budget	Active in	Main objective
AFR100 – Private Project	Moringa Partnership	Moringa	$56 million until 2030	Broad range of countries in sub-Saharan Africa	Moringa is a pioneer impact fund dedicated to profitable agroforestry projects with high environmental and social impacts.
AFR100 – Private Project	Permian Global	Permian Global	Not available	Ghana, Congo Basin countries	Develop and implement projects that optimise natural forest carbon-storage for climate-change mitigation. Its business: production and sale of high-quality verified carbon credits, generated through large-scale conservation and recovery of natural forest.
AFR100 – Private Project	Form International – Netherlands	Form International	$150 million by 2030	Ghana, Tanzania	Assets under management: 27,000 hectares of sustainable forest plantations, forest restoration, nature conservation and agroforestry. Focus: restoration of degraded forest lands into productive, ecologically and socially functioning landscapes.
AFR100 – Private Project	Terra Global Capital	Terra Global	$100 million by 2030	Republic of Congo, Democratic Republic of Congo, Rwanda, Tanzania, Malawi, Mozambique	Advisory for structuring and implementing institutional arrangements and financing structures for forest and agriculture mitigation activities.
AFR100 – Private Project	Acumen	Acumen	Not available	Kenya, Ghana	In the agroforestry sector, to help build financially sustainable organisations that deliver affordable goods and services that improve lives through sustainable poverty reduction, and attain climate resilience.

Flagship projects and initiatives	Organisation	Funders	Budget	Active in	Main objective
AFR100 – Private Project	&Green Fund	&Green Fund	Not available	All tropical forest countries	Prove that financing inclusive, sustainable and deforestation-free commodity production can be commercially viable and replicable. Rural development that protects forests and peatlands while promoting high-productivity agriculture.
AFR100 & GGWI	TerrAfrica / NEPAD (Secretariat)	TerrAfrica's Strategic Investment Programme (SIP)	Close to $2 billion	Benin, Burundi, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Ethiopia, Ghana, Guinea, Kenya, Liberia, Madagascar, Malawi, Mozambique, Niger, Republic of Congo, Republic of Sudan, Rwanda, Senegal, South Africa,	A regional initiative which leverages funds to scale up sustainable land management in sub-Saharan Africa. Develop harmonised and programme-based initiatives in SLWM. Improve coordination between governments, the int. development community and other stakeholders.
The Great Green Wall Initiative (GGWI)	Secretariat: UNCCD Partners: CILSS, EU, FAO, GEF, IUCN-PACO, OSS, WBG	Partners. Financial resources mobilised at beneficiary country level.	$8 billion	Algeria, Benin, Burkina Faso, Cape Verde, Chad, Djibouti, Egypt, Eritrea, Ethiopia, Ghana, Libya, Mali, Mauritania, Niger, Nigeria, Senegal, Somalia, Sudan, Gambia, Tunisia	Restore 50 million hectares of land via a 7.775km long and 15km wide 'green wall' running through the African Sahara-Sahel Belt.
Sahel and West Africa Program (SAWAP)	TerrAfrica, The World Bank, GEF, The European Union, The African Union	GEF: $80.4 m. Least Developed Countries Fund: $20.4 m. Special Climate Change Fund: $4.6 m.	$1.1 billion. WBG: $1.8 b. co-financing in 12 countries.	Benin, Burkina Faso, Ethiopia, Ghana, Mali, Mauritania, Niger, Nigeria, Senegal, Sudan, Chad and Togo	Includes BRICKS and supports GGWI

Flagship projects and initiatives	Organisation	Funders	Budget	Active in	Main objective
Action Against Desertification Program	EU, FAO	EU, FAO	€41 Million	Burkina Faso, Ethiopia, Gambia, Niger, Nigeria and Senegal	Supports GGWI
FLEUVE – Local Environmental Coalition for a Green Union (2014-18)	UNCCD's Global Mechanism, (GM), FAO, RESAD, RADDO, and Drynet	EU	€7 Million	Burkina Faso, Chad, Mali, Niger and Senegal	Supports GGWI
The Triple S Initiative (3S security, stability, and sustainability)	Secretariat: UNCCD. Task force: board of representatives from 12-14 countries.	2 options: S3 targets adopted by a donor process; or different donors support different actions	3S dedicated fund of €100 under the Valletta Trust Fund	Across Africa	Migration, security, stability, sustainability, resource conflict, employment and climate change resilience.
Bonn Challenge	Overseen by: GPFLR Secretariat: IUCN	Varies by country	Varies by country	Pledges in million ha.: Benin: 0.5, Burundi: 2, Central African Republic: 3.5, Côte d'Ivoire: 5, Democratic Republic of the Congo: 8, Ethiopia: 15, Ghana: 2, Kenya: 5.1, Liberia: 1, Madagascar: 4, Malawi: 4.5, Mozambique: 1, Niger: 3.2, Republic of Guinea: 2, Republic of the, Congo: 2, Rwanda: 2, Uganda: 2.5	Bring 150m hectares of the world's deforested and degraded land into restoration by 2020, and 350m ha. by 2030.
The Restoration Initiative	IUCN (Lead Agency), FAO, UNEP (All three GEF agencies)	The Global Environment Fund, and anticipated co-financing contributors	$254 m. (of which $200 million anticipated co-financing)	Cameroon, Central African Republic, China, Democratic Republic of Congo, Guinea-Bissau, Kenya, Myanmar, Pakistan, São Tomé and Principe, and Tanzania	Supports Bonn Challenge. 1m ha. of deforested and degraded landscapes under restoration; 46m ha. under improved management incorporating conservation of biodiversity; 190m tons CO_2e sequestered.

Flagship projects and initiatives	Organisation	Funders	Budget	Active in	Main objective
Food Assistance for Assets	World Food Programme	Not available	Not available	West Africa (The Gambia, Senegal, Guinea-Bissau, Mauritania, Mali, Guinea, Liberia, Côte d'Ivoire, Burkina Faso, Niger, Chad, Cameroon, Central African Republic), Middle East (Egypt, Sudan), Eastern and Central Africa (South Sudan, Ethiopia, Kenya, Somalia, Uganda, Rwanda, Burundi) Southern Africa (Democratic Republic of the Congo, Tanzania, Malawi, Mozambique, Zimbabwe, Swaziland, Lesotho, Madagascar)	137,600 hectares of land were rehabilitated in 2016, and 8,100 hectares of forests were planted in 2016 (globally)
Atlas of Forest Landscape Restoration Opportunities	GPFLR: IUCN, WRI, University of Maryland	N/A	N/A	Globally	Interactive map portraying Bonn Challenge Pledges, Restoration Opportunities, Forest Condition, Current Forest Coverage, Potential Forest Coverage, and Human Pressure.
Forest Investment Program (FIP)	Climate Investment Funds (CIF) through: AFDB, ADB, EBRD, IDB, WBG	FIP grants and low-interest loans, via partner multilateral development banks	$775 million (Global)	Burkina Faso, Cameroon, Côte d'Ivoire, Democratic Republic of the Congo, Ghana, Mozambique, Rwanda, Tunisia, Uganda, Zambia	Provide indispensable direct investments to benefit forests, development and the climate
Global Restoration Initiative	WRI Partners: GPFLR, GCF Task Force, LPFN	Varies by project	Varies by project	Varies by project	Partner globally with governments, businesses, and communities to restore 500 million ha. of deforested and degraded land.

Flagship projects and initiatives	Organisation	Funders	Budget	Active in	Main objective
African Model Forest Network	International Model Forest Network	Not available	Not available	Two Model Forests in Cameroon, with others in development in Morocco, Algeria, Tunisia, the Democratic Republic of Congo and countries in the Congo Basin	Implement a participatory, landscape-level approach to the sustainable management of natural resources. Create a process for broad partnerships, representative of environmental, social and economic forces at play on the landscape
Accelerating Action on REDD+ through FLR	IUCN & WRI	Gov. of Norway: the International Climate and Forest Initiative	Not available	6 countries, of which 2 in Africa: Ethiopia and Rwanda	To catalyse processes contributing to forest landscape restoration across 150 million hectares by the end of 2020
Forest Ecosystem Rehabilitation	IUCN	The German Ministry for the Environment	Not available	7 countries, of which 2 in Africa: Kenya and Uganda	Stimulate awareness and commitment to landscape-scale forest ecosystem rehabilitation to bridge land-based mitigation and adaptation Pilot initiatives to optimise actions that contribute to both objectives
Forest and Farm Facility	IUCN & FAO & IIED	FAO	Not available	Global	Support forest and farm producers organisations (FFPOs). FFPOs are key service delivery in forested landscapes in terms of extension services, access to markets and finance, policy influencing for increased security of tenure and capacity building

Flagship projects and initiatives	Organisation	Funders	Budget	Active in	Main objective
SUSTAIN-Africa	IUCN	MFA of The Netherlands	Not available	Tanzania, Mozambique	Facilitate joint action among community, government and business stakeholders to manage water, land and ecosystems sustainably while ensuring that small-scale producers, vulnerable communities and women are included.
Stabilizing Land Use	IUCN	The German Ministry for the Environment	Not available	Democratic Republic of Congo, Ghana, Tanzania and Uganda	To demonstrate conservation and development benefits in four targeted landscapes through better use of Protected Area categories V and VI
EPIC – Ecosystems Protecting Infrastructure and Communities	IUCN. Partners: University of Lausanne, l'Institut National de La Recherche Agronomique, the Mangrove Action Project, Swiss Federal Institute for FSLR	The German Ministry for the Environment	Not available	Senegal, Burkina Faso	Promote the implementation of ecosystem-based disaster risk reduction through 5 case studies
Towards pro-poor REDD+	IUCN, REDD+, DANIDA	MFA of Denmark (DANIDA)	Not available	Cameroon, Ghana, Guatemala, Indonesia and Uganda	By 2020, national climate change mitigation initiatives incorporate principles of Pro-Poor Approaches and Human Rights-based Approaches). To deliver and implement policies and programmes that reduce deforestation/degradation, improve livelihoods and secure carbon stocks

Flagship projects and initiatives	Organisation	Funders	Budget	Active in	Main objective
Kickstart Food with Rabobank	Rabobank and UNEP	Rabobank	$1 billon	Not available	Promote sustainability certification for clients. Advise on sustainable production methods and soil management. Together with UNEP offer grants and enable clients to initiate large-scale land restoration and forest protection projects. Positively affects risk profiles for easier access to loans.
REDD+	FAO / UNDP / UNEP	EU. Governments of Norway, Denmark, Spain, Japan, Luxemburg, Switzerland	$300 million	Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Ethiopia, Gabon, Ghana, Guinea, Guinea Bissau, Kenya, Liberia, Madagascar, Malawi, Morocco, Nigeria, South Sudan, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe	Reduce emissions from deforestation and forest degradation. Improved role of conservation, sustainable management of forests, and enhance forest carbon stocks in developing countries.
Program on Forests (PROFOR)	Secretariat: The World Bank	UK's DFID, Swiss SDC, EU, Germany's GIZ, Finland's DIDC, Japan's IFCO, Italian MFA, Dutch Ministry of Agriculture, Nature and Food Quality, WBG	$13.2 million (2016)	Benin, Cameroon, Burkina Faso, Central African Republic, Democratic Republic of Congo, Gabon, Ghana, Kenya, Liberia, Madagascar, Malawi, Mozambique, Namibia, Rwanda, Tanzania, Uganda, Zambia, Zimbabwe	Encourages a big-picture approach to forest conservation and management.

Flagship projects and initiatives	Organisation	Funders	Budget	Active in	Main objective
Baviaanskloof, South Africa	Common Land	See: Partners	Not available	Baviaanskloof, South Africa	Transition from traditional to sustainable and profitable goat-farming practices, identify business opportunities for improved water security through large-scale ecosystem restoration, and planting trees to restore degraded hillsides.
Varying projects	Just Diggit	See: https://justdiggit.org/nl/over/	Not available	Currently active in: Kenya, Tanzania, Morocco. Active in the future in: Malawi, Benin, Burkina Faso, Ghana	Re-greening, soil restoration, wildlife conservation, reforestation, soil water resource rehabilitation and enhancement, sustainable agriculture.
Sustainable Agriculture	Solidaridad	Nationale Postcode Loterij	€18.5 million (2016)	Ghana, Kenya, Nairobi, South Africa	Fair and sustainable agriculture.
Wetlands conservation and restoration	Wetlands International	Turing Foundation, Government of Germany (BMZ), Netherlands Embassy in Mali, EU, Shell	€3.04 million (2016)	Across Africa, see 2016 annual report on Africa.	Restore and conserve wetlands in a landscape approach, with the purpose of empowering local communities.

Appendix 3: Non-exhaustive list of organisations included in the stakeholder visualisation

Civil Society Organisations	**(Development) Banks**	**Donor Governments**	**Foundations and Non-profits**
Cordaid International Land Coalition IUCN OXFAM Solidaridad World Vision	African Development Fund Asian Development Bank European Bank for Reconstruction and Development IDB Rabobank World Bank Group	France Germany Netherlands Norway Switzerland USAID	Caux Initiatives of Change Commonland EcoAgriculture Partners Wetlands International
International Organisations	**Private Sector**	**Regional Organisations**	**Research Institutes**
CBD FAO IOM UNCCD UNDP UNEP UNFCCC WFP	Acumen Ecoplanet Bamboo Form International GreenWorld Campaign Moringa Partnership Permian Global Capital Terra Global Capital &Green Fund	African Union European Union IGAD	CGIAR CIFOR Erasmus University World Agroforestry Centre WUR WRI University of Amsterdam Utrecht University